

## A More Mobile Campus: A Proposal for a New Mobility Map at the University of Washington

In an era in which civil rights laws have strived to create equality, many societal practices and perspectives continue to segregate individuals who are considered “different,” such as people with disabilities. William J. Brennan, Jr., an Associate Justice of the Supreme Court from 1956-1990 said, “...society's accumulated myths and fears about disability and disease are as handicapping as are the physical limitations that flow from actual impairment” (qtd. in Guiduli 1167). Brennan is acknowledging that while faced with physical impairments, negative perceptions of disability make life more difficult for people with disabilities. Often treated as second-class citizens, they face dilemmas every day. One of the issues they must overcome is accessibility, whether to buildings or an education. An analysis of university mobility maps gives insight into how individuals with disabilities are accommodated. For example, at the University of Washington (UW), a mobility map<sup>1</sup> depicts an aerial representation of the campus with symbols showing routes and entrances. Because the map abstracts details of the campus, it is often rendered useless for navigation and denies people with disabilities adequate access to an education. The Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990 forbid discrimination on the basis of disability and provide for equal access to education (U.S. Department of Justice). If the UW does not provide sufficient services to allow individuals with disabilities to navigate the campus, then disability rights are infringed upon. As such, it is important that the university improve its mobility maps to ensure equal opportunity and accessibility to an education.

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<sup>1</sup> See attached Figure 1: UW Mobility Map

People with disabilities, who this paper particularly defines as people who are wheelchair-mobile, are an under-represented group in society. Their needs are overlooked by urban planners resulting in a built environment that is poorly accommodating and exclusive. In an interview I conducted with a student (who asked to remain anonymous) with disabilities at the UW, she expressed her frustrations with navigating the campus: “It took me a whole year to get used to everything, like finding routes and entrances. I just learned to look in the nooks and crannies” (UW student). The photos below, which show the wheelchair entrance to Raitt, support her statement (Vu).



*Accessible entrances behind Raitt; note the dumpsters and vehicles in the area in the left photo.*

The wheelchair accessible door is located at the back of the building. Not only is it hard to find, but it is amongst dumpsters and routes used by maintenance trucks. As a result of this built environment, wheelchair-mobile students are forced to access Raitt not by grand entrances through the picturesque Quad, surrounded by stretches of lawn and cherry blossoms. Instead, their entrance is out of sight, through cement paths next to garbage receptacles and near moving vehicles. Entrances that do offer ramps are often to the side, or hidden in shrubbery with barely visible wheelchair symbols, as shown in the photos below (Vu).



*Left: Accessible side entrance to Savery; note the wheelchair symbol hidden in the shadows; it is barely visible. From this view, you can not even see the entrance. Right: Accessible side entrance to Suzzallo; again, the wheelchair symbol is not very visible.*

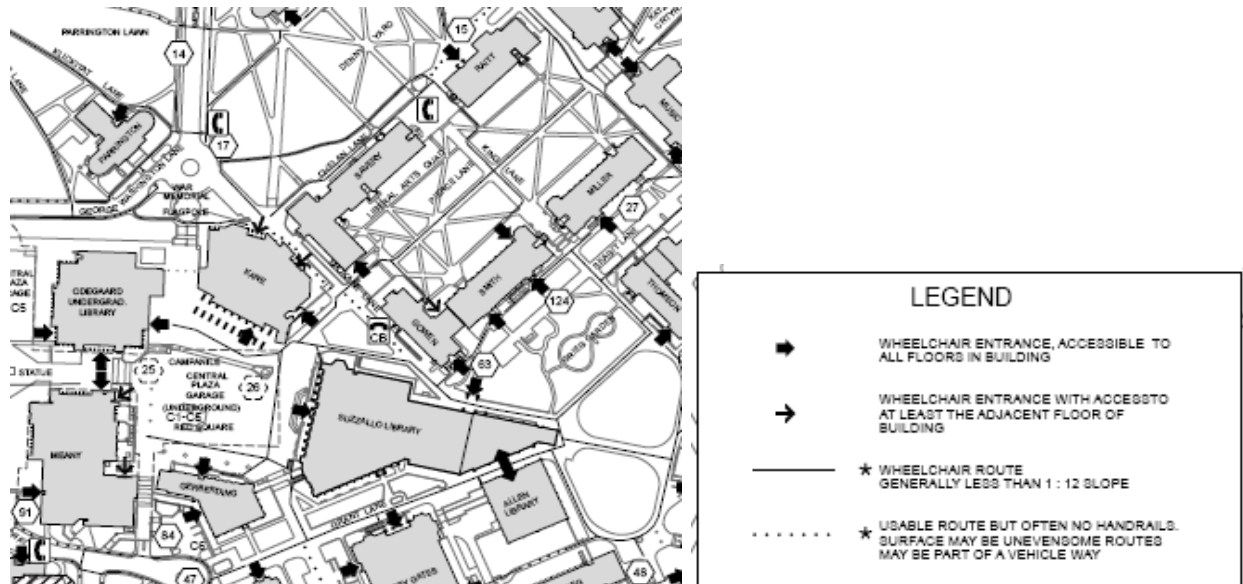
These photos suggest that the university does not have the best interests of people with disabilities in mind. Although steps have been taken to assure access to every building, it seems as though the university would rather place students with disabilities in hidden, unfavorable conditions rather than scar the architectural appearance of building entrances with ramps and handrails. The prioritizing of appearance over accessibility is particularly evident in some of the university's oldest buildings.

The UW was established in 1861, prior to the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. The Rehabilitation Act, Section 504 states that “no qualified individual with a disability shall be excluded from, denied the benefits of, or be subjected to discrimination under any program that receives Federal financial assistance. . . . Requirements include . . . program accessibility; and accessible new construction and alterations” (U.S. Department of Justice). The ADA Title II requires that “state and local governments give people with disabilities an equal opportunity to benefit from all of their programs, services, and activities” (USDOJ). Because the UW campus was founded in 1861, older buildings were constructed before these civil rights laws prohibited the discrimination of individuals with disabilities. The fact that past architects chose to create impressive entrances with stairs shows that they did not prioritize the needs of individuals with mobility impairments.

This leaves one to wonder, if disability rights laws were not passed, would the university continue to prioritize aesthetic appearance over equal opportunity?

The aesthetically pleasing environment of the UW campus has provided many obstacles for people with disabilities. Obstacles, such as longer detour routes, inclinations and uneven paths, or hidden entrances, slow down people who are wheelchair-mobile. In the same interview I conducted with the UW junior student, she explained, "...even after I knew where I was going, I still had to give myself extra time because the routes that I can take aren't on the main paths" (UW student). Lior Losinsky, who studied accessibility at a South African university, found that the average speed of wheelchair-mobile students is half as fast as that of ambulant students (306-307). As a result, many students with disabilities are unable to get to classes during the allotted passing time. Accessibility at the university is not limited to building entrances, but includes whether a student is able to get to class on time. In a similar accessibility study at the University of Liverpool, Gill Chard says, "If our environment is inclusive, nobody should have to allow extra time. It was the built environment that disabled them, not any impairment" (621). Thus, campus designers have the power to improve the conditions for wheelchair-mobile individuals and include them in the campus. If the university is unwilling to make changes to the physical environment, then it is important that the UW make available services that help students with disabilities negotiate with the existing campus.

The UW's Disabled Services Office attempts to help individuals approach the obstacles of the campus by providing an accessibility map (Facilities Services). It shows a bird's-eye view of a representation of the campus and symbols of wheelchair routes and building entrances.

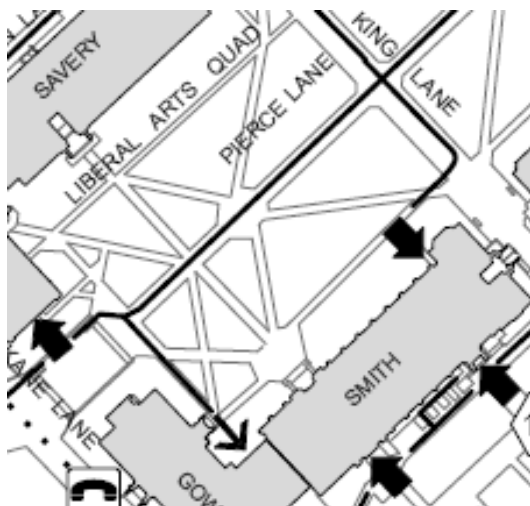


Section of current mobility map showing Red Square and the Quad; legend is included showing meaning of symbols.

This map was created to help students navigate by showing them accessible paths. However, the generalizations and abstractions of the map render it quite useless, and it is very difficult to read. As the legend shows, a single, solid line depicts wheelchair routes. This uniform abstraction fails to specify anything about the route details. The legend attempts to indicate some conditions by stating, “*generally less than 1:12 slope*” or “*often no handrails*” or “*surface may be uneven*” (Facilities Services, emphasis added). But what exactly is the slope leading from Drumheller to Red Square? Is the surface smooth brick, uneven brick, or cement? All of these are questions that a mobility-impaired student must take into consideration when planning routes. The single, solid line does not adequately answer any of these questions and gives a false impression of uniformity and ease of mobility.

To improve the existing, two dimensional, abstract mobility map, the university should provide a digital, interactive, panoramic map of the campus. Like the Google Maps StreetView application, this new map would allow individuals with disabilities to view photographs of the surrounding environment from any angle (Google Maps). Additional captions and pop-up boxes of information will highlight features, such as switches to operate doors, or stairs that the viewer

may not see. By capturing real images through photographs and highlighting specific details, the map will overcome existing map abstractions. In a UK study on effective mobility maps, Mary Fuller found that maps produced by wheelchair users were more detailed, indicating barriers and constraints to mobility (364). Actual images will allow anyone on campus to see specific entrances and paths in relation to the building and the environment as a whole. They will see whether the entrance is hidden. They will know whether there is a switch-door entrance or whether they have to open the door themselves. They will also see surface conditions, path width and whether there are handrails. The existing 2-D mobility map does not show any of these details. The two images below show the abstract entrance and the actual entrance to Smith (Vu).



*Left: accessibility map; arrow showing entrance into Smith from side facing the Quad is shown in an actual photo on the right.*

The current, abstract map removes vegetation, which may hide entrances, it eliminates doorways and substitutes them with arrows, and it replaces uneven brick paths with solid lines. By only showing symbols, the map conveys that the campus is accessible and is omitting barriers. A more detailed representation of the campus showing obstacles will allow students to foresee which areas to avoid. This new map, which will provide actual images of the built environment,

will eliminate abstractions and generalizations and therefore provide valuable means for anyone with disabilities to navigate the campus.

To further improve the existing campus map, the new, digital mobility map will be presented from the point of view of the target audience. The new map will contain images taken from the eye-level of someone seated in a wheelchair. This viewing feature enables students with disabilities to preview routes; they can take virtual tours and see the surroundings as if they were actually there. Unlike virtual, panoramic views, the current mobility map provides a bird's-eye view of campus. This perspective does not cater to the needs of students who are wheelchair-mobile. According to Peter Vujakovic, who leads the Access and Mobility Mapping Project at Cambridge University, "Any attempt to produce effective cartographic representations of the built environment must take into account the collective images of place derived from the personal geographies of people with physical disabilities" (362). Therefore, to make the new map as useful as possible, a UW panel of individuals with disabilities will help capture the images from their point of view. Vujakovic's statement also implies a powerful function of this map: it may function as a tool for physically able individuals to gain insight into the lives of wheelchair-mobile people. Urban planners may also utilize this tool to learn about which features of the built environment are the most accommodating or hindering in design. From the mobility map, they will know how to construct future designs with maximum accessibility. Also, by seeing the personal geographies of individuals who are wheelchair-mobile and gaining an understanding of the difficulties they face, others may change their attitude towards people with disabilities to one which is more positive and helpful. Although this new technology may not be a sufficient means of changing attitudes, it encourages engagement between ambulant and wheelchair-mobile individuals, thus closing the socially produced gap between them. Therefore,

this map is not just a navigation tool, but a means to fully integrate individuals with disabilities into a society from which they should not have been segregated in the first place.

This segregation of individuals with disabilities at the UW is another problem that existing campus services and maps produce. The main campus map does not contain accessibility information. This representation of space wipes out the embodied practices of an entire demographic group. Consequently, the UW is excluding individuals with disabilities from the campus community. Actions such as these encourage the gap in society between people with and without disabilities. Not only are mobility maps separate representations of space entirely, but if a student needed one, they would have to request it from the Disabled Services Office or access it online. The current accessibility map is not readily available like the main campus map. In “Universal Access and the Built Environment: From Glaciers to the Garden Gate,” Andrew Walker criticizes what he calls the special needs industry, which reinforces the idea that people with disabilities require different needs and charity of the public, as if they were not part of it (qtd. in Chard and Couch 608). As a result, the new, digital mobility map should be readily available and circulating as part of a main campus map, not separately. For example, the imaging technology to construct the map will capture views of the entire campus at the eye level of both ambulant and wheelchair bound individuals. This virtual touring map will be available online or accessed through mobile phones to everyone as the main campus map. Viewers will have the option of switching back and forth between a normal view and a mobility view. The only difference is that the option for mobility-impaired students will contain highlighted details and information and will be at their eye level. By including the perspectives of people with disabilities in the main campus map, the map will integrate them and give them a voice. The existing campus maps do not include the personal geographies of people with disabilities,

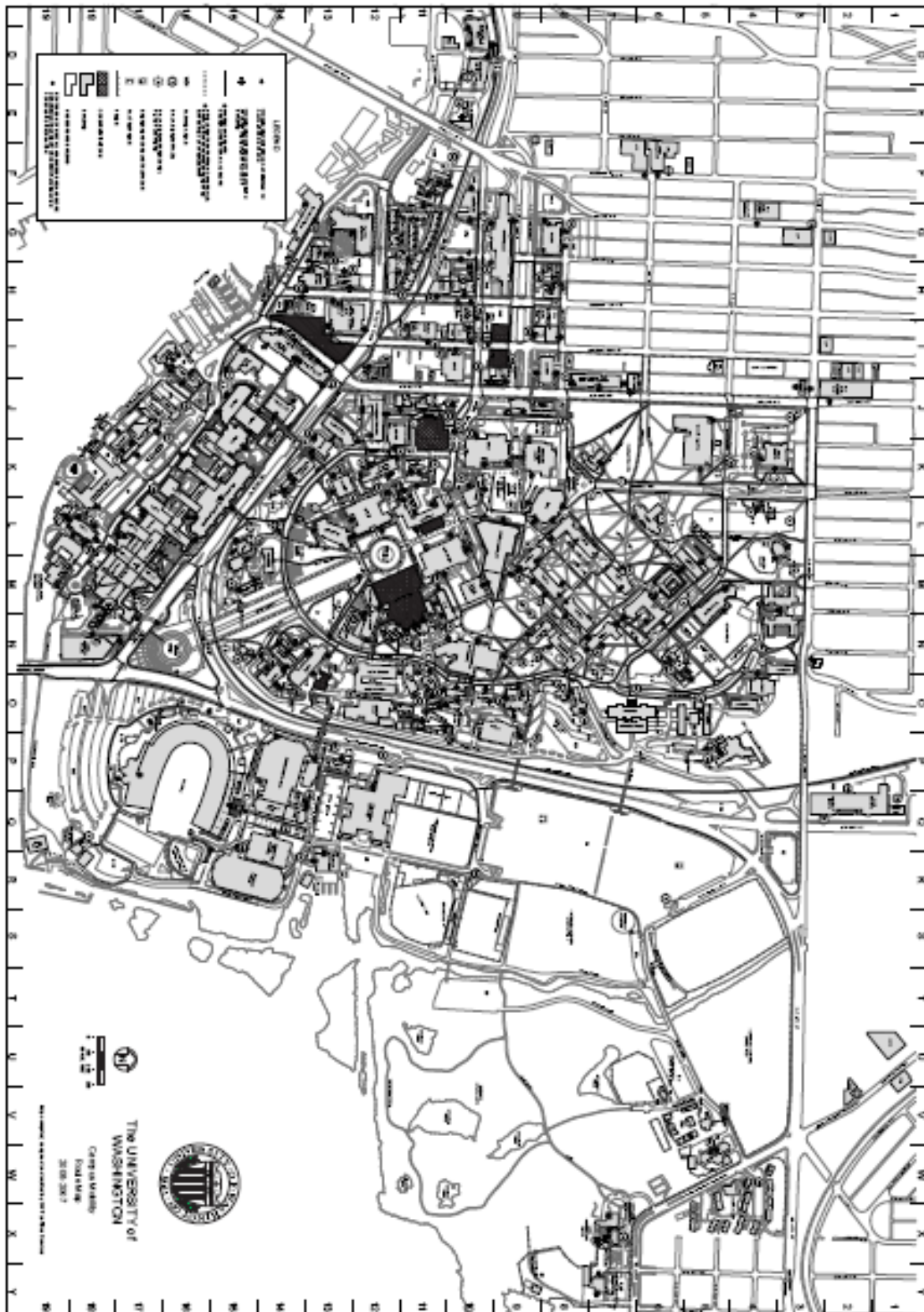


suggesting that they are unimportant and not to be heard. As Vujakovic points out, “Cartographic silences reinforce political silences and therefore sustain the political disempowerment of specific groups within society” (363). Therefore, the improved digital mobility map will empower students with disabilities by offering them adequate services to a higher education and through their integration into the campus community. Once acknowledged as members of the campus, they will have more opportunities to be heard and influence the community.

The built environment and existing maps of the UW exclude individuals with disabilities from a higher education. The current mobility map is both a physical barrier, with its significant abstractions that hinder navigation, and it is a social barrier, since its separate circulation supports the notion that students with disabilities are a separate group of people with different needs. By segregating people with disabilities and obstructing their access to education, the university is possibly eliminating future opportunities. A. Hurst, who studies disability in higher education, states, “When disabled people enter higher education...it is an important experience for empowerment” (141). As such, the proposed, digital map, showing details from the point of view of individuals with disabilities, will empower students by breaking down physical and social barriers and allowing them to integrate into the campus community. As an institution that embodies the advancement of knowledge and lives, the university’s attitude towards disability is not very progressive. As Charles Cooley, an American sociologist, reminds us, “The chief misery of the decline of the faculties, and a main cause of the irritability that often goes with it, is evidently the isolation, the lack of customary appreciation and influence, which only the rarest tact and thoughtfulness on the part of others can alleviate” (qtd. in Udovenko). Not only will improving disability services help improve the lives of students with disabilities by removing

feelings of isolation and giving them influence, but it will advance the university into a new era of social integration. Perhaps the new digital map will also provide opportunities for other under-represented groups as well.

Figure 1: UW Mobility Map



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